



A U.S. Department of Defense Information Analysis Center sponsored by Defense Information Systems Agency, **Defense Technical Information Center**

IMPROVING THE DEVELOPMENT PROCESS FOR CHEMICAL AND BIOLOGICAL WARFARE MODELING AND SIMULATION

By Roger L. Gibbs, JSIG M&S Commodity Area Manager, Naval Surface Warfare Center, Dahlgren, VA

Advances in computer technology have brought rapid change to Modeling and Simulation (M&S). Programs limited to mainframe computers or the early high-end workstations just 10 years ago can now operate from desktop personal computers, and are being transitioned for use in the battlefield. Only the most rigorous and complex models such as computational Fluid Dynamics (CFD), hydrocodes, and numerical weather prediction codes are still restricted to mainframes and massively parallel workstations.

Currently, the fielding of M&S programs does not require an acquisition program with milestone decision points or any other formal review process in many cases. Almost anyone can modify an existing code or develop a new one and distribute or sell it to real or potential users with few or no approvals. Historically, program developers have been part of the 6.1 or 6.2 Research and Development (R&D) community where the early implementation of algorithms on computers originated. Today, most (but not all) chemical and biological warfare (CBW) hazard assessment models now in widespread use have never been through an advanced development program.

Models like VLSTRACK (Vapor, Liquid and Solid Tracking) and HPAC (Hazard Prediction and Assessment Capability) do not have to follow an acquisition path with mandatory milestone reviews. No formal process has been established in the joint service Nuclear, Biological and Chemical (NBC) Defense program for fielding, which has resulted in the same confusion and problems that would exist if any other commodity had unmanaged competition and were fielded directly from 6.2 R&D. Contributing to the current problem is the lack of a specific requirement for accuracy and the inability to evaluate the model's performance under all conditions due to a

lack of adequate field trial data. Since hazard assessment model cannot perfectly reproduce reality, they have to be evaluated like any other less than perfect technological solution: there must be a tradeoff of runtime, accuracy, ease of use, logistics support, utility of results, cost, etc.

Emphasis has been placed on the hazard assessment tools that will be fielded either alone or in JWARN (Joint Warning and Reporting Network) at the expense of conflict simulation tools such as TACWAR (Tactical Warfare), JCATS (Joint Conflict and Tactical Simulation), JTLS (Joint Theatre-Level Simulation) and their eventual replacements JWARS (Joint Warfare System) and JSIMS (Joint Simulation System). These are the tools that will be used to assess the readiness of U.S. and allied forces to fight in an NBC environment. Studies such as the Quadrennial Defense Review (QDR), the J-8 Weapons of Mass Destruction (WMD) Study and the various major wargames shape the perceptions of our military leaders, our civilian defense department leaders and our political leaders. Their perceptions translate into budgets for the appropriate R&D and acquisition to train and equip our fighting forces. CB effects are still not adequately represented in the existing tools like the Joint Staff version of TACWAR that are relied upon for the QDR. Without the innovation and effort that must come from the chemical and biological (CB) defense M&S program, the next generation models like JWARS and JSIMS may suffer the same deficiencies as their predecessors.

JOINT SERVICE CBW M&S

A broad topic that encompasses meteorological models; transport and dispersion models; hazard assessment; casualty assessment; computational fluid dynamics; hydrocodes; and constructive, live and virtual simulation; joint service CBW M&S includes hardware and software issues, interfaces, documentation, data, studies

and analyses. Results of this program affect acquisition decisions, national command authority decisions, doctrine, training and tactics. Tools developed here are intended for a variety of decisions that often have life and death consequences. The high level of importance coupled with the insufficient coordination (a result of the rapid expansion in this area) has resulted in two initiatives; one in the joint service CB defense program and another at the Office of the Secretary of Defense (OSD) level.

JSIG M&S CAM

In February of this year, the Joint Service Integration Group (JSIG) formally established the M&S Commodity Area Manager (CAM). Unlike all other commodity areas, the M&S CAM is under the

See "Improving the Development Process"
Continued on page 3

ON THE INSIDE

2	CB News Excerpts
4	Contract Awards
5	CBIAC Activities
5	1999 Defense Almanac
6	Calendar of Events
8	Selected Inquiry Responses
9	DTIC '99
10	New Acquisitions
11	Mail List Update

CB NEWS EXCERPTS

The CBIAC has compiled a list of related CB news articles and taken excerpts from them to create brief overviews. The CBIAC does not provide secondary distribution of articles, but can provide directions on where to find an article of interest.

Kazakhs Seek Secrets of Soviet Test Site
Collett-White, Mike

<http://infoseek.go.com/>

August 17, 1999

Kazakhstan wants to know about the uninhabited island of Vozrozhdeniye and where the Soviets had a main biological weapons test site in the Aral Sea. As the Aral Sea dries up and recedes, Kazakh authorities have been in contact with the United States to launch a joint effort to carry out experiments and assess the risks. The Soviet program, which continued for almost two decades after Moscow signed the 1972 Biological and Toxin Weapons Convention, tested anthrax, tularaemia, brucellosis, plague, typhus, and smallpox.

Japan Plans Measures Against Biochemical Warfare

<http://infoseek.go.com/>

August 19, 1999

Japan, concerned over possible military threats from North Korea, plans to step up its self-defense measures related to biological and chemical warfare. The U.S. plans to set up special units within Japan's Ground Self-Defense Force to develop equipment to deal with attacks involving biological and chemical weapons. Japan plans to send several military officials to the U.S. Army Chemical School and other U.S. institutes next year to study techniques to detect and protect against biological weapons. It is anticipated that the agency will recommend that five billion yen (\$45 million) be set aside in the next fiscal year to finance a program to deal with weapons of mass destruction.

DoD Restructures Anthrax Vaccine Production Contract

Office of the Assistant Secretary of Defense (Public Affairs) News Release

August 5, 1999

The DoD announced that it has restructured its contract with BioPort Corp., manufacturer of the anthrax vaccine, to provide a higher per-dose contract price and

advance payments to the company. This action was taken to preserve the financial viability of BioPort in order to ensure uninterrupted production of the anthrax vaccine. As required by statute, the Army Contract Adjustment Board determined that its action would facilitate the national defense. The Board's decision was implemented by a negotiated contract modification.

United States and Ukraine Extend Nunn-Lugar Cooperative Threat Reduction Agreement

Office of the Assistant Secretary of Defense (Public Affairs) News Release

August 5, 1999

The U.S. and Ukraine exchanged diplomatic notes extending the agreement to continue the Cooperative Threat Reduction (CTR) program in Ukraine through December 2006. The Nunn-Lugar program provides equipment, services, and technical advice to assist Ukraine, Russia, and other newly independent states in preventing proliferation and in securing and dismantling weapons of mass destruction (WMD), related materials, and production facilities inherited from the former Soviet Union. Through fiscal 1999, Congress has provided a total of \$2.7 billion for CTR programs with \$569 million dedicated to efforts in Ukraine. (In additional news releases, it was acknowledged that the U.S. and Russia also extended the Nunn-Lugar CTR Agreement through June 2006. Of the total \$2.7 billion for CTR programs, \$1.7 billion has been dedicated to efforts in Russia.)

Commission Says America Must Reorganize Preparedness for WMD

Emergency Preparedness News

July 20, 1999

Since many agencies have overlapping jurisdictions in the area of preparedness against weapons of mass destruction (WMD), a bipartisan commission recommended four major changes and a series of other changes to enhance U.S. preparedness to prevent the proliferation of weapons of mass destruction. The four major changes include: 1) giving the vice president a special role in the National Security Council to ensure adequate attention to WMD proliferation; 2) creation of a new post in the White House of National Director for Combating Proliferation; 3) reorganizing processes and operation in the Defense, Energy, and other departments responsible to provide sustained day-to-

day focus and coordination to develop long-term strategies; and 4) adopting integrated planning and budgeting for all of the government's nonproliferation activities. The complete article can be found at <http://www.senate.gov/~specter>. The CBIAC has a full copy of the report. (See **Recent Acquisitions** on page 10)

Abgenix and U.S. Army Collaborate on Development of Antibody Countermeasures To Biological Weapons

<http://infoseek.go.com/>

July 13, 1999

A collaboration has been formed between the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) and Abgenix, Inc. to develop antibodies that could potentially protect U.S. troops during biological warfare. USAMRIID will use Abgenix's XenoMouse technology to make fully human monoclonal antibodies against filoviruses (i.e., Ebola and Marburg viruses). Data from the 1995 Zaire outbreak of Ebola indicate that antibody therapy may be a viable means of treating a filovirus infection based on the survival of 7 of the 8 patients who received whole blood from recovering patients who survived an infection of Ebola.

Ominous Rebuilding: Iraq Apparently Again Trying to Make Chemical, Biological Weapons

<http://www.abcnews.go.com/sections/world/DailyNews/iraq990712.html>

July 12, 1999

Evidence exists showing Iraq trying to repair and rebuild facilities where chemical and biological weapons production was previously suspected. Since U.N. monitors are no longer present on the ground, it is impossible to tell just how many banned weapons Iraq may be trying to make. Evidence shows Iraq experimenting with and perhaps producing camel pox, an analog to smallpox, as well as hemorrhaging conjunctivitis. Officials are monitoring Iraqi efforts to obtain dual-use technologies. Additionally, the U.N. is considering an Iraqi request to rebuild a foot and mouth vaccine production plant. Iraq previously admitted that this plant produced botulinum toxin. Although U.N. inspectors did not find evidence of botulinum toxin in a recent inspection, anthrax spores were found.

*See "CB News Excerpts"
Continued on page 5*

“Improving the Development Process”

Continued from page 1

JSIG rather than the Joint Service Materiel Group (JSMG), because it was determined that many of the current problems could be solved through the standard requirements' process. Developing requirements for the various models and simulations goes well beyond general purpose models like VLSTRACK and HPAC and addresses constructive and virtual conflict simulation, CBW equipment survivability, fixed site effects, Theatre Ballistic Missile Defense (TBMD) ground effects, Simulation Based Acquisition (SBA), etc. While this is a good and necessary step, it does not address the lack of an advanced development program.

REQUIREMENTS

In addition to what a model or simulation has to do, requirements will specify software coding standards, documentation format standards, verification standards, validation criteria, HLA (High Level Architecture) compliance, etc. Requirements will also include software interface specifications so that standardized data can be used by all applicable models as input and the model output can be used by higher level simulations or systems. The software equivalent of a Test and Evaluation Master Plan (TEMP) is also needed.

VERIFICATION, VALIDATION AND ACCREDITATION (VV&A)

Validation in particular requires data. While data from a substantial number of field trials are available, much of the data is of questionable value and some obvious and important holes can be identified. DO-49 needs to be tasked to support new field trials and perform quality assurance on old trial data.

Benchmark data for both models and simulations needs to be developed and integrated into the M&S development process. Benchmarks for accuracy, run time, interface testing, etc. are needed. Theater level simulations which parameterize and aggregate effects could benefit by using benchmarks to compare their results with those from more rigorous (and longer running) entity level simulations. Ensuring that casualties are estimated accurately is one example of a useful simulation benchmark.

VV&A must also encompass data certification. Agent toxicity and munition parameters are obvious data that needs certification. Less obvious perhaps is the data that is used in simulations such as performance degradation due to Mission Oriented Protective Posture (MOPP), heat stress, sub-lethal exposure, treatment, etc.

OVERARCHING INTEGRATED PRODUCT TEAM

In March of this year, Mr. Walt Hollis, Deputy Under Secretary of the Army for Operations Research, proposed to the Office of the Secretary of Defense for Acquisition and Technology "that an overarching integrated product team (OIPT) be established to provide the Department of Defense (DoD) and multi-service direction to the CB Modeling and Simulation program and to develop and promulgate hazard prediction and risk assessment guidelines for use within the department." Mr. Gansler approved the OIPT and established an executive group consisting of Dr. Delores Etter, Deputy Under Secretary of Defense (Science & Technology); Dr. Jay Davis, Director, Defense Threat Reduction Agency (DTRA); Mr. Vincent Roske, Deputy Director, J-8; and Mr. Hollis. This executive group leads a large group of principals consisting of senior leaders from DoD offices considered to be stakeholders in the development, use or results of CB M&S.

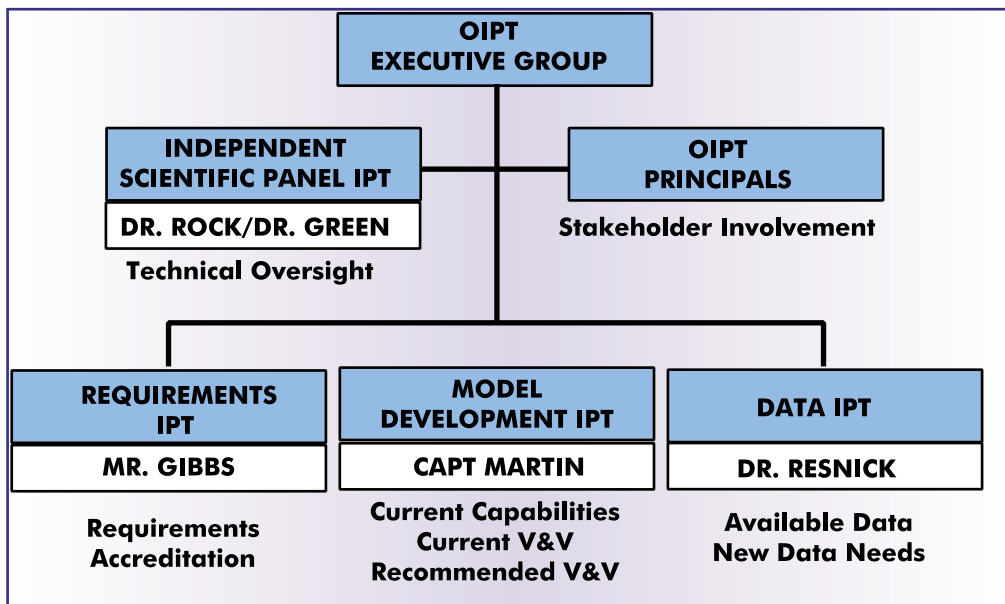
The OIPT is supported by four Integrated Product Teams (IPT) charged with developing DoD processes for their respective areas. The first is the Requirements IPT which I chair; it establishes processes for identifying requirements. The second,

chaired by CAPT David Martin, considers processes for CB M&S Research, Development, Test and Evaluation (RDT&E) including verification and validation (V&V). The third IPT will develop processes for identifying, obtaining and certifying data used by models and simulations. In addition, another IPT has been established to perform an independent scientific review of the efforts of the three process IPTs.

CONCLUSIONS

M&S is a rapidly growing area of increasing importance to joint service NBC defense. The joint service program consists of a \$3M per year 6.2 program. Much more CB M&S development is being done by DTRA under Advanced Concept Technology Demonstrations (ACTDs) and Defense Technology Objectives (DTOs), by Ballistic Missile Defense Organization (BMDO), by the Department of Energy (DoE) and other government agencies which must become an integral part of the joint service effort. The current program operates without formal requirements and with the exception of JWARN must transition its products to advanced development programs outside of the NBC defense area. The OIPT is expected to bring an as yet unrealized synergism to the CB M&S community.

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or visit the new JSIG website at
<https://jsigmsca.nswc.navy.mil/>.
The site is password protected.



CONTRACT AWARDS

1. **U.S. Marine Corps Light Weight Helmet Program**
Gentex Corp.
Carbondale, PA
\$75,318 (as part of a \$500,318 base year total). July 1999
By U.S. Army Test & Evaluation Command
2. **Naval Information Warfare Systems Development**
Veridian Systems
California
\$38.1 Million. July 20, 1999
By Naval Air Warfare Center Weapons Division
3. **Development of Computer Model that Predicts the Effects of Chemical and Biological Warfare Including Terrorist Attacks**
Titan Corporation
San Diego, CA
\$3.8 Million. July 13, 1999
By Defense Threat Reduction Agency
4. **Nerve Agent Antidotes**
Meridian Medical Technologies, Inc.
Columbia, MD
\$22,963,052. July 1999
By Defense Supply Center Philadelphia
5. **Proton Pump Inhibitors**
Astra Pharmaceuticals, L.P.
Wayne, PA
\$43,960,000. August 1999
By Defense Supply Center Philadelphia
6. **Studies to Support the Medical Chemical Defense Program**
Battelle Memorial Institute
Columbus, OH
\$35,661,888. May 1999
By U.S. Army Medical Research Acquisition Activity
7. **Chemical and Oil Protective Gloves**
Charleston Rubber Co.
Charleston, SC
\$332,441. July 28, 1999
By Defense Personnel Support Center Philadelphia
8. **Butyl Material Fabricated into Collective Protection Equipment**

- Intellitec, Inc.
2000 Brunswick Lane
Deland, FL 32724
\$456,002. August 10, 1999
By U.S. Army Armament and Chemical Acquisition and Logistics Activity
9. **Chemical and Oil Protective Gloves**
Montgomery Group Inc.
Montgomery Safety Products
1117 Marion Ave SW
Canton, OH 44706
\$73,287. August 3, 1999
By Defense Personnel Support Center
10. **M295 Decontamination Kit**
Trueteck, Inc.
680 Elton Street
Riverhead, NY 11901
\$3,251,118. August 20, 1999
By U.S. Army Armament and Chemical Acquisition and Logistics Activity
11. **Chemical Detector Kit**
Bachrach, Inc.
625 Alpha Drive
Allegheny County, Pittsburgh, PA 15238
\$99,514. August 12, 1999
By Defense General Supply Center
12. **Chemical Protective Undershirt**
Daun-Ray Casuals Inc
1811 Estill Road, PO Box 230
Tullahoma, TN 37388-0230
\$167,200. July 19, 1999
by Defense Personnel Supply Center
13. **Chemical Speciation of PM2.5 Filter Samples**
Research Triangle Institute
PO Box 12194
Research Triangle Park, NC 27709
\$12,290,680. July 12, 1999
By U.S. Environmental Protection Agency
14. **Multipurpose Integrated Chemical Agent Alarm (MICAD)**
Lockheed Martin Librascope
811 Sonora Avenue
Glendale, CA 91201
\$7,156,511. July 2, 1999
By AMC Acquisition Branch
15. **Biological Warfare Research**
University of Texas SW Medical Center
Dallas, TX

- \$855,849. July 14, 1999
By SPAWAR - Charleston
16. **Biological Warfare Defense Research**
Maxygen, Incorporated
515 Galveston Drive
Redwood City, CA 94063
\$6,800,000. July 15, 1999
By SPAWAR - Charleston
17. **Biological Warfare Defense Research**
State University of New York (SUNY)
Stony Brook, NY
\$115,000. July 20, 1999
By SPAWAR - Charleston
18. **Biological Warfare Defense Research**
Rockefeller University
\$400,000. July 26, 1999
By SPAWAR - Charleston
19. **Protective Equipment**
Rich Industries Inc
New Philadelphia, OH 44663
\$31,585. July 23, 1999
By Naval Inventory Control Point
20. **Engineering Services to Study Flow Dynamics of Micro-Mechanical Flying Insects and Fascularized Microtissue Arrays for Generic Toxin and Pathogen Detection**
Sarnoff Corporation
201 Washington Road
Princeton, NJ 08543-5300
\$4,639,033. July 27, 1999
By SpaWarSysCen-San Diego
21. **Harnessing TLR4, the Sole Endotoxin "Switch" Protein for Instantaneous Antimicrobial Chemotherapy In Vivo**
University of Texas Southwestern Medical Center at Dallas
5323 Harry Hines Blvd.
Dallas, TX 75235-9056
\$885,849. July 29, 1999
By SPAWAR - Charleston
22. **Care, Maintenance, Security, Surveillance and Safety of the Newport Chemical Depot**
Mason & Hanger Corporation
Lexington, KY
\$12,582,911. September 1, 1999
By U.S. Army Test and Evaluation Command

For further information, contact:
Mary Frances Tracy
Tel: (410) 612-6417
E-mail: tracymf@battelle.org

CBIAC ACTIVITIES

Current Awareness and Promotions

The CBIAC attended and staffed an exhibit booth at the following conferences:

- ♦ **The 1999 South Carolina Weapons of Mass Destruction Conference** held August 25-27, 1999 in Charleston, South Carolina.
- ♦ **The International Soldier Systems Conference 99, Soldier Systems Advance Planning Briefing for Industry (APBI) and Exhibition** held September 7-9, 1999 in Orlando, Florida.
- ♦ **The Air Force Scientific and Technical Information (STINFO) Conference and Workshops** held September 14-16, 1999 in Colorado Springs, Colorado.

Products

Updated on a regular basis, the **CBIAC Homepage** can be accessed on the Internet at <http://www.cbiac.apgea.army.mil> and includes:

- ♦ **CBIAC Starter Kit**
- ♦ **CBIAC Newsletter**
- ♦ **CBIAC User Survey**
- ♦ Interactive forms for ordering CBIAC products, applying for database access, or requesting inquiry services
- ♦ Hyper-text links to **Key CB Documents** on the Internet
- ♦ On-line **CB Internet Directory** Accessible on the World Wide Web
- ♦ Brochures and Flyers: Upon request, free brochures and flyers describing the CBIAC products and services listed below will be provided individually or in a complete set known as the CBIAC Starter Kit.

- *General Information*
- *Basic Products Catalog*
- *Current Awareness and Promotions*
- *Information Products and Services*
- *Inquiry and Referral Services*
- *Technical Area Tasks (TATs)*

Acquisition and Processing

The CBIAC has incorporated citations from the West Deseret Technical Information Center (WDTIC) at Dugway Proving Ground, Utah, into the CBIAC Bibliographic Database (BD). Qualified users now have access to over 99,000 citations to documents related to chemical and biological defense (CBD). Some of the document holdings reside at the CBIAC, and some at Dugway, with a small overlap. The database at the WDTIC is a mirror of the CBIAC BD. This merger brings the CBIAC one step closer to the goal and commitment to be a "One stop shop " for CBD informational resources.

CB News Excerpts

Continued from page 2

Guardsmen Training to Aid Civil Leaders in WMD Cases

Wedeking, Eric, Sgt. 1st Class
American Forces Press Service
(afisnews_sender@DTIC.MIL)

August 2, 1999

Approximately 220 National Guardsmen are training at Fort Leonard Wood, MO, to help civilian authorities rapidly react to potential terrorist incidents involving weapons of mass destruction (WMD). The National Guard established 10 military support detachments and expects all to have an initial operational capacity by the end of 1999. One detachment was assigned to each Federal Emergency Management Agency region. The units have been called Rapid Assessment Initial Detection (RAID) teams.



Press Service

[SMTP:afisnews_sender@DTIC.MIL] <mailto:> Friday,
August 20, 1999 12:00 PM
DEFENSE-PRESS-SERVICE-L@DTIC.MIL
1999 Defense Almanac Hits the Web

WASHINGTON -

The 1999 Defense Almanac is alive, well and running at
<http://www.defenselink.mil/pubs/almanac/>.

From 1980 through 1997, Defense magazine printed an annual compendium of DoD facts and figures known the "Almanac." As part of a broad cost cutting effort to move to a paperless environment, the Defense Reform Initiative of 1997 ended printing of the magazine, and sent the Almanac into history's recycle bin.

On Aug. 19, a new online Almanac made its debut. Past readers should find this new Almanac even more useful than paper editions of old because the Web allows continuous updates of source information. Reference contents include data on DoD organization, money, budget and people. More categories will be added as information becomes available.

Those with questions or comments about the Almanac can e-mail its editor, Jim Garamone, at jagaram@hq.afis.osd.mil.

Errata:

The hardcopy of the **CBIAC NEWSLETTER** Summer 1999 Vol. 5 No. 3 was inadvertently printed with the label "...Spring 1999, Vol. 5 No. 2". The PDF file on our website is correct. Our apologies for any confusion this may have caused.

CALENDAR OF EVENTS

The CBIAC highlights conferences, symposia, meetings, exhibitions and workshops of interest to the CB community both on our website at <http://www.cbiac.apgea.army.mil> and in every issue of our newsletter. If you would like to have a CB-related event posted on the CBIAC Calendar of Events, submit the pertinent information to Mary Jo Waters, via E-mail at watersm@battelle.org. Due to space limitations, the CBIAC will accept submissions on a first-come, first-served basis and reserves the right to reject submissions.

1999 MEETINGS

October 1-3

Wilton Park Conference

CBW Terrorism – Risks, Implications and Government Responses

Wiston House

Steyning, West Sussex, UK

POC: Heather Ingrey

Tel: +44 1903-817764

Fax: +44 1903-814217

E-mail: heather.ingrey@wiltonpark.org.uk

October 2 & 3

Biological Warfare and Terrorism: The Military and Public Health Response

Taped Rebroadcast from September 21, 22, 23; 11:30 AM - 5:30 PM ET

POC: Mr. Darren Gerlach

Tel: 301-619-7515

DSN: 343-7515

POC: Mr. Rick Stevens

Tel: 301-619-4880

DSN: 343-4880

URL: <http://www.biomedtraining.org>

October 5-6

Jane's Chem-Bio and Unconventional Threat: Technology Need and the Future

Washington, DC

POC: Marian Sullivan

Tel: 703-683-3700

Fax: 703-836-0118

E-mail: marian.sullivan@janes.com

URL: <http://conference.janes.com>

October 5-7

International NBC Defence Symposium

Shrivenham, Wiltshire, UK

POC: Mrs. Andrea Harrison

Tel: +44 1793 785648

Fax: +44 1793 785325

E-mail: a.harrison@rmcs.cranfield.ac.uk

URL: <http://www.rmcs.cranfield.ac.uk/main-cran.shtml?/news/>

October 10-14

Pittsburgh '99

9th International ISRP Conference: Respiratory Protection: Emerging Hazards and Solutions for the Coming Millennium

Sheraton Hotel Station Square

Pittsburgh, Pennsylvania

POC: Joann Garvin

Tel: 724-843-7501

Fax: 724- 843-7613

Email: ccsinc2@timesnet.net

URL: <http://www.isrp.com>

October 11-13

AUSA Annual Meeting and Exhibition

Washington, DC

POC: Diane FitzGerald

Tel: 703-841-4300 Ext. 661

Fax: 703-243-2589

E-mail: dfitzgerald@ausa.org or ausa-info@ausa.org

URL: <http://www.ausa.org/meetings/calendar.htm>

October 12-15

The Fifth Asia – Pacific Congress on Animal, Plant and Microbial Toxins

Royal Cliff Beach Hotel

Pattaya, Thailand

Tel: 662-252-0161

Fax: 662-254-0212

October 22-23

3rd International Workshop on Distributed Interactive Simulation and Real-Time Applications (DIS-RT 99)

University of Maryland Hotel and Conference Center

College Park, Maryland

POC: Azzedine Boukerche

Tel: 940-565-4869

Fax: 940-565-2767

E-mail: boukerch@cs.unt.edu

URL: <http://www.cs.unt.edu/~boukerch/wdis99/>

October 24-28

MASCOTS '99

Seventh International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems

University of Maryland Hotel and Conference Center

College Park, Maryland

POC: Patrick Dowd

Tel: 301-688-0347

Fax: 301-688-0588

E-mail: dowd@computer.org

URL: <http://www.ani.univie.ac.at/mascots99>

October 25-29

International Modeling and Simulation Week

Old Dominion University

Norfolk, Virginia

POC: imswweek

Tel: 877-292-0966

Fax: 757-686-6214

URL: <http://www.imsweek.org>

October 27-29

NATO Modeling & Simulation Conference: "A New Design For Promoting Alliance Interoperability and Reuse"

Clarion Hotel Downtown Norfolk

Norfolk, Virginia

POC: Barbara McDaniel

Tel: 703-247-2569

Fax: 703-522-1659

E-mail: bmcdaniel@ndia.org

URL: <http://www.trainingsystems.org/Events/01N.htm>

November 1-2

Jane's Non-Lethal Weapons '99

Copthorne Tara Hotel

London UK

POC: Marian Sullivan

Tel: 703-683-3700

Fax: 703-836-0118

E-mail: marian.sullivan@janes.com

URL: <http://conference.janes.com>

November 1-3

ITEC Asia

Seoul, Republic of Korea

POC: Nelson Jackson

Tel: 703-247-2575

Fax: 703-522-1885

E-mail: njackson@ndia.org

URL: <http://www.itec.co.uk/itec-asia99/homepage.htm>

November 2-4

5th Biennial Chemical and Biological Warfare, Technology and Intelligence Update

National Maritime Intelligence Center

Washington, D.C.

Note: U.S. Government Only; SECRET-NOFORN-NOCONTRACTOR

POC: Ms. Amy Coverstone/Ms. Karin Julian

Tel: 410 569-0200

Fax: 410-569-0588

E-mail: coverstonea@battelle.org

November 3-4

WMD & Domestic Preparedness III: Interoperability & the Medical Management of a Bio-Terrorist Incident

The Shriner's Hall

Washington, D.C.

POC: Karen Brooks

Tel: 202-638-4260

Fax: 202-662-9719

E-mail: kingcomm@kingpublishing.com

URL: <http://www.kingpublishing.com>

November 6-10

The 4th Congress of Toxicology in Developing Countries

Antalya, Turkey

Tel: 90-312-222 9909

Fax: 90-312-212 2326

E-mail: ek03-k@tr-net.net.tr

URL: <http://www.pharmacy.ankara.edu.tr/turktox/>

November 8-10

DTIC '99

Annual Users Meeting and Training Conference

DoubleTree Hotel National Airport

Arlington, Virginia

POC: Ms. Julia Foscue

Tel: 703-767-8222 or DSN 427-8222

Fax: 703-767-8228 or DSN 427-8228

Email: jfoscue@dtic.mil

URL: <http://www.dtic.mil/dtic/conferences.html>

November 15-19

NDIA Aircraft Survivability Symposium

Monterey, California

POC: Charles Wilkins

Tel: (703) 247-2577

Fax: (703) 522-1885

E-mail: cwilkins@ndia.org

URL: <http://www.ndia.org>

November 15-19

International Conference 1999 Basic and Therapeutic Aspects of Botulinum and Tetanus Toxins

Hyatt Orlando

Kissimmee, FL

URL: <http://www.toxin99.org/>

November 16-17

Jane's CyberTerrorism: The Risks and Realities

Ronald Reagan Building

Washington, D.C.

POC: Marian Sullivan

Tel: 703-683-3700

Fax: 703-836-0118

URL: <http://conference.janes.com>

November 17-18

1999 CSEPP Medical Conference

San Antonio, Texas

URL: <http://csepp.apgea.army.mil>

November 29-December 2

Interservice/Industry Training, Simulation and Education Conference (IITSEC 99)

Orange County Convention Center

Orlando, Florida

POC: NTSA-Barbara McDaniel

Tel: 703-247-2569

Fax: 703-243-1659

E-mail: bmcDaniel@ndia.org

URL: <http://www.iitsec.org/>

December 5-8

1999 Winter Simulation Conference (WSC 99)

Pointe Hilton at Squaw Peak

Phoenix, Arizona

POC: Dave Sturrock

Tel: 412-741-3727

Fax: 412-741-5635

E-mail: dsturrock@sm.com

URL: <http://www.msosa.dmsomil/mscalendar/default.asp?fctn=evedetails&itemid=673>

URL: <http://www.wintersim.org>

December 5-9

mCBMTS-Sofia '99: "Disaster Management in Southeast Europe"

Rodia Hotel

Sofia, Bulgaria

POC (U.S.): Colonel Richard Price

Fax: 207-829-6376

E-mail: asa@ime.net

URL: <http://www.asanltr.com>

POC: (Bulgaria): Professor Christopher Dishovski

Fax: 359 2 544 933

E-mail: chdishov@iph.bio.bas.bg or CBMTS99@bio.bas.bg

URL: <http://www.bio.bas.bg/~cbmts99/>

December 6-9

4th Annual Joint Services P2/Hazardous Waste Management Conference & Exhibition:

Environmental Stewardship in the New Millennium

Henry B. Gonzalez Convention Center

San Antonio, Texas

POC: Christy Kline

Tel: 703-247-2587

Fax: 703-522-1885

URL: <http://www.ndia.org>

E-mail: ckline@ndia.org

December 8-9

Weapons of Mass Destruction and Domestic Preparedness: Integrating First Response and Medical Management

Chicago, Illinois

Tel: 202-662-9710

Fax: 202-662-9719

URL: <http://www.KingPublishing.com>

*See "Calendar of Events"
Continued on page 8*

2000 MEETINGS

February 1-3

11th Annual SO/LIC Symposium and Exhibition: "Technological and Operational Reality for Conflict in the New Millennium"

Crystal City, Virginia

Event # 088

POC: Angie DeKleine

Tel: 703-247-2599

Fax: 703-522-1885

E-mail: adekleine@ndia.org

URL: <http://www.ndia.org/events>

March 27-30

11th Annual U.S. Army Ground Vehicle Survivability Symposium

DoubleTree Hotel & Naval Post Graduate School

Monterey, California

POC: Ira Click

Tel: 703-247-2573

Fax: 703-522-1885

E-mail: iclick@ndia.org

URL: <http://www.ndia.org>

May 7-12

Chemical and Biological Medical Treatment Symposia Series CBMTS III

Swiss NC Laboratory

Spiez, Switzerland

POC: Richard Price

Tel: 207- 829-6376

Fax: 207-829-3040

E-mail: asa@ime.net

URL: <http://www.asanltr.com/>

May 15-18

Global Demilitarization

Location: Coeur d'Alene, Idaho

POC: Megan McCrory

Tel: 703-522-1820

Fax: 703-522-1885

E-mail: mmccrory@ndia.org

URL: <http://www.ndia.org>

May 22-25

Remediation of Chlorinated and Recalcitrant Compounds: The Second International Conference

Monterey Conference Center

Monterey, California

URL: <http://www.battelle.org/environment/er/chloconf.html>

June 13-15

NBC 2000: Symposium on Nuclear, Biological and Chemical Threats in the 21st Century

Helsinki University of Technology

Espoo, Finland

POC: Dr Katri Laihia

Tel: +358-14-602 655

Fax: +358-14-602 501

E-mail: laihia@cc.jyu.fi

URL: <http://www.vtt.fi/aut/rm/spt/index1.htm>

June 19-23

Eurosatory 2000: International Land Defence Equipment Exhibition

Paris-Le Bourget, France

Tel: 33-1 44 14 58 10

Fax: 33-1 42 30 70 88

E-mail: Coges.eurosatory@wanadoo.fr

URL: <http://www.eurosatory.com/anglais/welcome.shtml>

E-mail: dprc@interchange.ubc.ca

URL: <http://www.safety.ubc.ca/5apcdm/>

SELECTED INQUIRY RESPONSES

This section of the newsletter contains selections of recent technical inquiries and responses on subjects we feel are of interest to our readers. The information presented has been edited to conserve space.

Q: What are some sources for the location, identification or purchase of military publications, standards or specifications?

1. **The Defense Technical Information Center (DTIC) Scientific and Technical Information Network (STINET) Service**, available at <http://www.dtic.mil/stinet/>, helps the DoD community access pertinent scientific and technical information. Public STINET gives you access to all unclassified, unlimited citations added into DTIC from late December 1974 to present. In addition to this feature, Secure STINET provides access to unclassified/unlimited citations added into DTIC from late December 1974 to present, limited distribution citations added from 1985 to present, all recently added unclassified, unlimited full text reports, the last 5 years of active Technical Effort and Management (TEAMS) reports, gray literature information, a language translator, and access to the British Library's inside web (U.S. Govt. only) and Canada Institute for Scientific and Technical Information's CISTI Source.

2. **The Department of Defense Single Stock Point (DODSSP)** for Military Specifications, Standards and Related Publications at <http://www.dodssp.daps.mil/dodssp.htm> contains links to the following resources:

ABOUT the DODSSP - Informational pages about the Department of Defense Single Stock Point for MilSpecs and Standards. Archived copies of the DODISS Notice can also be found here.

ASSIST - The Acquisition Streamlining and Standardization Information System (ASSIST) is a database system for DOD-wide standardization document information management. Go here for links to ASSIST Online and the ASSIST Shopping Wizard.

PROCUREMENT GATEWAY - The Procurement Gateway is designed to provide prospective Government contractors and other interested parties with Internet access to Request for Quotation (RFQ) and post-contract award documents for work to be performed for the Defense Logistics Agency (DLA).

TMPODS - The Technical Manual Publish-On-Demand System (TMPODS) website offers several useful job status and search features for customers who have placed document orders from this digital warehouse.

NEDS - The Navy Electronic Directives System contains a complete digital library of all unclassified OPNAV and SECNAV Directives and Forms under the cognizance of the Office of the Chief of Naval Operations.

Other links on the DODSSP website include:

DLA - Defense Logistics Agency

DAPS - Defense Automated Printing Service

Defense Standardization Program Office

NSSN - A National Resource for Global Standards

NAVSUP Reference Libraries

*See "Selected Inquiry Responses"
Continued on page 9*

Selected Inquiry Responses

Continued from page 8

3. **The General Dennis J. Reimer Training and Doctrine Digital Library** at <http://www.adtdl.army.mil/atdls.htm> is an electronic "library without walls". The Library is the single repository of approved Army training and doctrine information. Field Manuals (FM) and Training Circulars (TC) are made available in concert with the US Army Training and Doctrine Command, Deputy Chief of Staff for Doctrine (TRADOC/DCSDOC) in electronic format.

4. **USA Information Systems, Inc. (USAIS)** at <http://www.usainfo.com/>, is a Virginia Corporation with federal logistics databases on CD-ROM for the defense industry. It provides documents encompassing Military, Federal & Commercial Specifications, Standards, Handbooks and Drawings Library including: DoD Adopted Federal Logistics Data Files (DLA, Army, Navy, Air Force, Marines & Coast Guard), Allowance Parts Lists (APL's), DoD Instructions, Directives Publications & Forms, Bid Service with EDI Transactions (DLA & FACNET transactions), and Vendor Catalogs, GSA Schedules, FAR regulations - all available over the Internet, Thin Client or CD-ROM.

5. **NSSN: A National Resource for Global Standards** at <http://www.nssn.org/> serves as a central point to search for standards from many sources including Industry, International and U.S. Government approved databases as well as information from more than 600 national, foreign, regional and international bodies. The NSSN's Standards Tracking and Automated Reporting (STAR) Service, available only by subscription via NSSN, buys you time and keeps you informed by tracking critical updates in the standards arena. In addition <http://www.nssn.org/quicklinks.html> is another source for links to U.S. Federal Government Standards and Regulatory Information Sites.



Note:

The appearance of an advertisement in this newsletter does not constitute endorsement by the DoD or CBIAC.



**Defense Technical
Information Center (DTIC)
To Host DTIC '99
Annual Users Meeting
& Training Conference
8-10 November 1999
Doubletree Hotel
National Airport
Arlington, Va**

This year's theme, "Information Strategies, Policies, and Possibilities," reflects DTIC's primary objective: to assist its customer community in meeting tomorrow's challenges by providing the most relevant information in the most appropriate format as quickly as possible.

DTIC '99 provides a unique opportunity for attendees to explore in detail new developments not only at DTIC, but throughout the federal technical information network. As in past years, the conference will feature a number of presentations and sessions that focus on the most current issues relative to the research, development and acquisition communities.

These sessions are designed to acquaint the participants with the latest policy and operational developments, and will provide practical details on valuable and diverse domestic and foreign information resources. They will also address security issues, the World Wide Web, copyright laws and the storage and dissemination of electronic documents.

In addition, DTIC is pleased to welcome Dr. Clifford Lynch, Coalition for Networked Information (CNI), and Mr. Thomas Thoma, Defense Information Systems Agency (DISA) as keynote speakers.

"Information Strategies, Policies and Possibilities" will provide timely, accurate information which will enable users to better meet the challenges of the future. It also promises to provide the tools needed to expand your horizons to meet these challenges!

For more information, please contact Ms. Julia Foscue, DTIC '99 Conference Coordinator, or access the DTIC Homepage on the World Wide Web.

Comm: (703) 767-8236
Email: jfoscue@dtic.mil
DTIC Homepage: <http://www.dtic.mil>

NEW ACQUISITIONS

The following acquisitions may be reviewed at the CBIAC. Information on how to obtain or review any of the listed acquisitions is included for your convenience. The CBIAC is not authorized to distribute duplicates of the listed acquisition.



Bozheyeva, Gulbarshyn, Yerlan Kunbayev and Dastan Yeleukenov. **Former Soviet Biological Weapons Facilities in Kazakhstan: Past, Present and Future.** Occasional Paper No. 1. Monterey, CA: Center for NonProliferation Studies, 1999, pp. 21.

"Kazakhstani facilities involved in the research and development, production, and testing of biological weapons (BW) played a key role in the former Soviet BW program. Although a number of open publications have addressed the former Soviet program in recent years, few have examined the Kazakhstani portion of the system. This report provides a history of Kazakhstani BW facilities and describes their current status and future prospects. The example of Kazakhstan also highlights the technical, economic, and financial problems associated with converting former BW facilities to peaceful activities in the post-Cold War era." An electronic version of this text is available on the Internet at <http://www.cns.miis.edu>.

CB-167615
D756824
Center for NonProliferation Studies
Monterey Institute of International Studies
425 Van Buren St.
Monterey, CA 93940
Phone: (408) 647-4193
Fax (408) 647-3519
<http://www.cns.miis.edu>

Commission to Assess the Organization of the Federal Government to Combat the Proliferation of Weapons of Mass Destruction. **Combating Proliferation of Weapons of Mass Destruction—Report of the Commission to Assess the Organization of the Federal Government to Combat the Proliferation of Weapons of Mass Destruction.** Washington, D.C.: GPO, 1999, pp. 267.

This wide-ranging, 174 page report, with 93 pages of appendices, covers such areas as Combating Proliferation: What the Federal Government Should Do?; Managing the Interagency Process; Export Controls; and Findings and Recommendations for Executive Branch Agencies. Collectively, the recommendations in this report seek to bring about four major changes. These are: (1) "...assigning the vice president a special role in the National Security Council to ensure that adequate attention and resources are devoted to WMD proliferation;" (2) Creation of the new post of National Director for Combating Proliferation to provide central direction and coordination of Federal counter-proliferation efforts; (3) Improvement of the execution of policies and programs by responsible agencies in ways that emphasize "an integrated government-wide effort to combat proliferation;" and (4) Integrated (interagency) planning and budgeting of resources.

Extensive appendices deal with nature and background of the Commission, individuals interviewed by the Commission, a baseline survey of counter-proliferation-related activities, counter-proliferation-related interagency groups, counter-proliferation-related reporting requirements, resource allocation and technology acquisition. An electronic version is available at <http://www.senate.gov/~specter/>

CB-167727.01
Commission to Assess the Organization of the Federal Government to Combat the Proliferation of Weapons of Mass Destruction
P.O. Box 18205
Washington, D.C. 20036
Phone: (202) 331-4060
Fax: (202) 296-5545

Cordesman, Anthony. **Weapons of Mass Destruction in the Middle East: Regional Trends, National Forces, Warfighting Capabilities, Delivery Options, and Weapons Effects.** Washington, D.C.: Center for Strategic and International Studies, 1999, pp. 108.

This report provides a regional as well as country-by-country analysis of various aspects of proliferation of WMD's in the Middle East. Countries profiled are

Algeria, Libya, Egypt, Israel, Syria, Iran, Iraq and Sudan. In addition to the topics listed in the subtitle, coverage includes "Terrorism and Unconventional Warfare," "Deterrence," "Defense," "Counterproliferation", and "Arms Control."

CB-167501
Center for Strategic and International Studies
1800 K Street, NW
Suite 400
Washington, D.C. 20006
Phone: (202) 887-0200
Fax: (202) 775-3199

U.S. Army Medical Research Institute for Chemical Defense. **Medical Response to Chemical Warfare and Terrorism.** Aberdeen Proving Ground, MD: USAMRICD, 1999, pp. 478.

This is a hardcopy version of USAMRICD's well known Live Satellite Broadcast course. Chapters include an overview of "Chemical and Biological Terrorism," "Cyanide," "Incapacitating Agents," "Nerve Agents," "Chemical Warfare Agents: Overview," "Pulmonary Agents," "Triage Case Studies," "Triage and Field Management" and "Vesicants." There are also charts depicting a "Casualty Decon Layout" and a "Personnel Decon Layout. The electronic version of this text is available in either PowerPoint or Zip format and can be found on the web at <http://ccc.apgea.army.mil/docs/docs.htm>

CB-167798
USAMRICD
3100 Ricketts Point Rd
Aberdeen Proving Ground, MD 21010.
Phone: (410) 436-2230

For further information, contact:
Richard M. Gilman
Tel: (410) 612-6415
E-mail: gilman@battelle.org

Thanks

**THANK YOU TO ALL
THE READERS WHO
PROVIDED UPDATED
MAILING ADDRESSES!**

Your response to our request was wonderful! If you have already verified your mailing address, provided an update, helped us to delete outdated addresses, or signed up as a new subscriber, a big "thank you" for your efforts. If you have not yet sent your corrections and updates, please take a moment to do so now. Send your modifications to the attention of Mary Jo Waters by fax [(410) 676-9703] or email (watersm@battelle.org).

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The appearance of an advertisement in the CBIAC Newsletter does not constitute endorsement by the DoD or the CBIAC.

Government agencies and private industry under contract to the Department of Defense can contact the CBIAC for informational products and services. The CBIAC serves as the center for the acquisition, compilation, analysis and dissemination of information relevant to chemical warfare and chemical and biological defense technology.

The CBIAC is located in Building E3330, Aberdeen Proving Ground - Edgewood Area, Maryland 21010. For further assistance or information, visit or contact the CBIAC Monday through Friday from 8:00 a.m. to 4:00 p.m., EST:

Mailing Address: CBIAC
P.O. Box 196
Gunpowder Branch,
APG, MD 21010-0196

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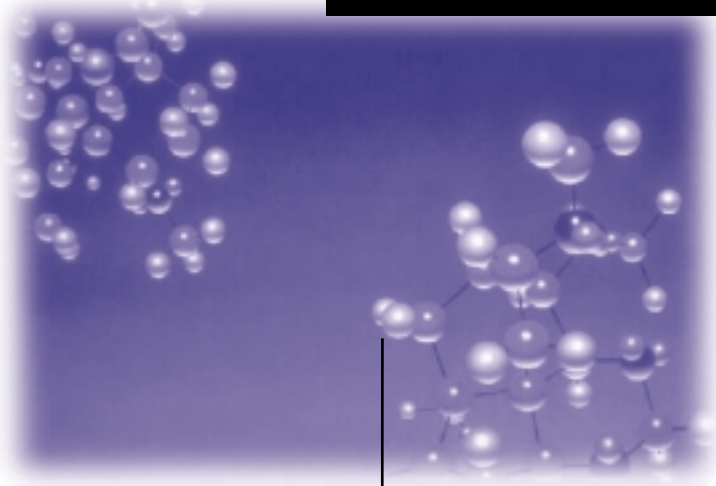
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Tel: 410-676-9030
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The Contracting Officer's Technical Representative for the CBIAC is Mr. Joseph D. Williams. He can be reached through his E-Mail address Joseph.Williams@sbccom.apgea.army.mil or at the following address:

CDR USA SBCCOM
Edgewood Chemical Biological Center
ATTN: AMSSRB-RRT-OM (Joe Williams E3330)
5183 Blackhawk Road
Aberdeen Proving Ground, MD 21010-5424

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